



FERNALD PROGRESS PHOTO ALBUM JANUARY 1998



6803-23



6803-16



SITE IMPROVEMENTS PROJECT

Shandon Yard

The Site Improvements Project (SIP) is the initial phase of post-Record of Decision Construction activities supporting Operable Unit 1, now known as the Waste Pits Remedial Action Project (WPRAP). The SIP consists of site clearing and grading, utilities and stormwater management system installation, and rail improvements and upgrades.

(Both Photos)

- CSXT laborers are installing new rail in Shandon Yard to facilitate the new switch to the Fernald site.



SITE IMPROVEMENTS PROJECT



6349-1268



6349-1272



SITE IMPROVEMENTS PROJECT

Locomotive Maintenance Building

The locomotive maintenance building will serve as the on-site facility for the repair and maintenance of the site's locomotive, and possibly rail cars. It will have a pit to allow servicing from underneath the units, facility heating to allow easy starting, and tool storage for maintenance.

(Left Photo)

- Locomotive maintenance building with the rail car stop.

(Right Photo)

- Interior of the locomotive maintenance building.



SITE IMPROVEMENTS PROJECT





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(Left Photo)

- Rail tamper aligning in track 13 ballast.

(Right Photo)

- Laser calibration is used to guide the rail tamper in aligning rail.



ON-SITE DISPOSAL FACILITY (OSDF)



6319-1069 & -1070



ON-SITE DISPOSAL FACILITY (OSDF)

The OSDF is located on the east side of the Fernald site and will be constructed in phases. Phase 1 of the OSDF construction consists of the excavation and liner installation for Cell 1 and partial excavation of Cell 2.

(Both Photos)

- OSDF Cell 1 with one foot of impacted soil placed and a crusting agent applied to the surface. The stormwater catchment area can be seen in the southwest corner of the cell. The North Drainage Channel, lined with riprap was designed to contain runon/runoff from a 2,000 year storm model.



ON-SITE DISPOSAL FACILITY (OSDF)



6584-180



6584-184



ON-SITE DISPOSAL FACILITY (OSDF)

Leachate Conveyance System

The Leachate Conveyance System will transfer leachate and stormwater runoff from the On-Site Disposal Facility's (OSDF) permanent lift station to the Biodenitrification Surge Lagoon (BSL). Existing piping connecting the lagoon to the Advanced Wastewater Treatment (AWWT) facility will be used to transfer leachate and stormwater to the AWWT for treatment.

(Left Photo)

- Control panel, alarm system, and power for the OSDF Permanent Lift Station.

(Right Photo)

- Leachate Collection System (LCS) /Leak Detection System (LDS) manholes for the OSDF Cell 3. The eight access points to the LCS manhole allow entry to the horizontal monitoring well, and five clean outs. The solar panel provides power to the manhole instrumentation.



ON-SITE DISPOSAL FACILITY (OSDF)



6319-326



6319-1073



ON-SITE DISPOSAL FACILITY (OSDF)

Haul Road

The Haul Road will be the primary means of transporting slightly contaminated waste material from the site's southern waste units (Active Flyash Pile, Inactive Flyash Pile, and South Field) to the OSDF.

(Left Photo)

- Past construction activities on the Haul Road.

(Right Photo)

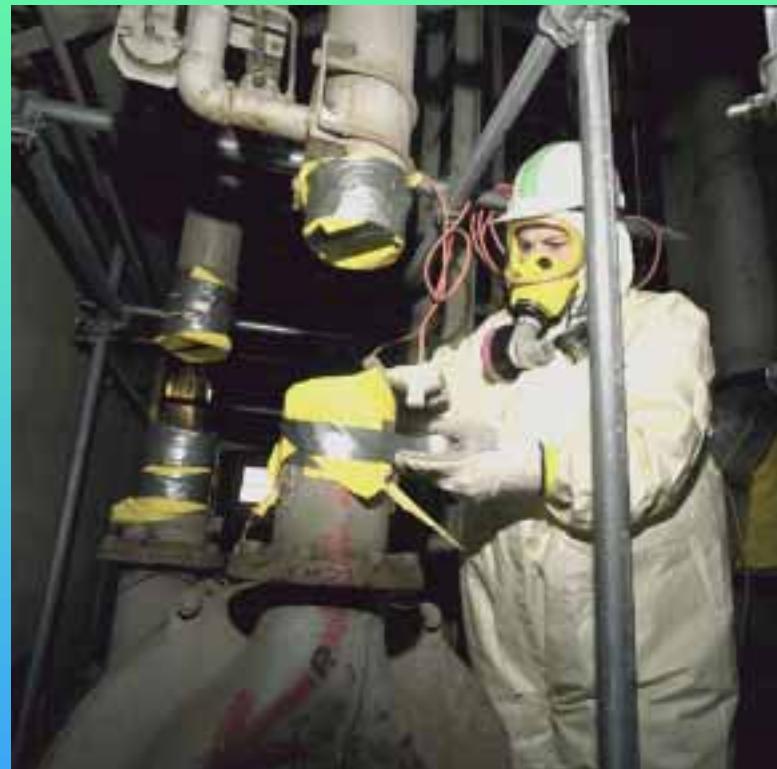
- Completed Haul Road.



FACILITIES SHUTDOWN PLANT 2/3



6681-63



6681-61



FACILITIES SHUTDOWN PLANT 2/3

Safe Shutdown work involves removing holdup material from equipment and lines in the former production buildings, in advance of building decontamination and dismantling.

(Left Photo)

- A HazWat secures a HEPA ventilation hose to the handrail on the fourth floor of the digestion area in Plant 2. The HEPA vacuum will be used to provide negative pressure while HazWats remove holdup material from a dust collector.

(Right Photo)

- A HazWat seals a duct with herculite. The blower unit has been isolated and all holdup material has been removed.



6383-410



6383-411



FACILITIES SHUTDOWN PLANT 8

Safe Shutdown work involves removing holdup material from equipment and lines in the former production buildings, in advance of building decontamination and dismantling.

(Left Photo)

- HazWats remove holdup material from oxidation furnace #2 and associated systems. The furnace was used to recover enriched material and for the stabilization of depleted uranium materials.

(Right Photo)

- HazWats vacuum oxidation residue from a section of duct work associated with oxidation furnace #2.



THORIUM/PLANT 9 COMPLEX



6494-148



6494-152



THORIUM/PLANT 9 COMPLEX

The decontamination and demolition of Thorium/Plant 9 Complex will include the removal of Plant 9, Building 32 (former Magnesium Warehouse), Buildings 64 and 65 (former Thorium Warehouses), Building 69 (Decontamination Building), Building 78 (Decontamination and Decommissioning), and Building 81 (Plant 9 Warehouse).

(Left Photo)

- Asbestos Workers use a portable manlift to remove overhead lines that contain asbestos insulation.

(Right Photo)

- Asbestos Workers wrap two layers of six mil poly to a section of asbestos insulation prior to conducting abatement activities.



THORIUM/PLANT 9 COMPLEX



6494-169



6494-162



THORIUM/PLANT 9 COMPLEX

The decontamination and demolition of Thorium/Plant 9 Complex will include the removal of Plant 9, Building 32 (former Magnesium Warehouse), Buildings 64 and 65 (former Thorium Warehouses), Building 69 (Decontamination Building), Building 78 (Decontamination and Decommissioning), and Building 81 (Plant 9 Warehouse).

(Left Photo)

- A Laborer uses a pry bar to remove railroad spikes and plates from the defunct rail line near Plant 9.

(Right Photo)

- A worker torch cuts railroad track into five foot sections. A fire watch stands in the background ready with water sprayer and a portable fire extinguisher.



BOILER/WATER PLANT



6407-437



6407-386



BOILER/WATER PLANT

Decontamination and Demolition of the Boiler Plant/Water Plant Complex.

(Left Photo)

- Asbestos Workers use man lifts to remove transite panels from the Boiler Plant.

(Right Photo)

- Workers use cutting torches to remove the bolts holding the window units in place.



BOILER/WATER PLANT



6407-396



6407-397



BOILER/WATER PLANT

Decontamination and Demolition of the Boiler Plant/Water Plant Complex.

(Left Photo)

- Asbestos Workers removing asbestos roof panels.

(Right Photo)

- An Asbestos Worker removes roof panels from the box used to transfer the panels from the roof to the interior of the building.



SILO 3 SMALL SCALE WASTE RETRIEVAL PROJECT



6759-73



6759-88



SILO 3 SMALL SCALE WASTE RETRIEVAL PROJECT

The Silo 3 Small Scale Waste Retrieval Project (SSWR), Phase I of the Silo 3 Project, will provide approximately 125ft³ of actual Silo 3 material for bidders on the Silo 3 RFP to test. The material will be drummed into 30 gallon drums over packed into 55 gallon drums, sampled, then shipped to the bidders. Treatability tests on actual Silo 3 material will provide more realistic results and create a higher degree of confidence for full-scale treatment of Silo 3 material. Additional physical characteristic data will be obtained on a grab sample of the material retrieved at or near the bottom of Silo 3. There have not been any samples obtained from this location of the silo. Prior to retrieval of actual material from Silo 3, a mock-up is being performed on Silo 4.

(Left Photo)

- A Radiological Control Technician assists a Millwright in donning a bubble suit and ancillary PPE in preparation to support the hot tap mock-up on Silo 4.

(Right Photo)

- Millwrights perform the Hot Tap Operability Test/Technical Evaluation Standard and mock-up on Decant Port #4 of Silo 4.



SOUTHERN WASTE UNITS



6734-276



6734-277



SOUTHERN WASTE UNITS

The remediation of the Southern Waste Units (Inactive Flyash Pile, South Field, and Active Flyash Pile) will be performed in two phases, site preparation and excavation. Site preparation will consist of all work necessary to prepare the site for excavation and a stormwater management system. Excavation will include, excavation, treatment/disposition of impacted material and interim restoration of the Southern Waste Units.

(Left Photo)

- An Operating Engineer prepares for the placement of the geomembrane liner in retention basin #3.

(Right Photo)

- A Laborer compacts clay material around a riser pipe in retention basin #3.



SOUTHERN WASTE UNITS



6734-280



6734-281



SOUTHERN WASTE UNITS

The remediation of the Southern Waste Units (Inactive Flyash Pile, South Field, and Active Flyash Pile) will be performed in two phases, site preparation and excavation. Site preparation will consist of all work necessary to prepare the site for excavation and a stormwater management system. Excavation will include, excavation, treatment/disposition of impacted material and interim restoration of the Southern Waste Units.

(Left Photo)

- Workers are placing the geomembrane liner in retention basin #3.

(Right Photo)

- An Operating Engineer assists in the placement of the geomembrane liner in retention basis #3.



PADDY'S RUN EMBANKMENT STABILIZATION PROJECT



6690-41



6690-40



PADDY'S RUN EMBANKMENT STABILIZATION PROJECT

Approximately 5,000 tons of riprap were placed on the East bank of Paddy's Run Creek to prevent further erosion of the creek near Silos 1 and 2.

(Left Photo)

- Operating Engineer spreads riprap in the creek bed near K-65.

(Right Photo)

- A Laborer directs an Operating Engineer during the placement of riprap.



AQUIFER RESTORATION



6261-323



6261-315



AQUIFER RESTORATION

Extraction/Injection Wells

The remediation of the Great Miami Aquifer will be achieved by area-specific groundwater restoration modules. These modules include, the South Plume Removal Action currently in operation, South Plume Optimization, South Field Extraction System Phase I, and the EM-50 sponsored Injection Demonstration, all of which are scheduled to begin operations in 1998.

(Left Photo)

- Workers position a 20 inch HDPE pipe into a large fusion welding machine.

(Right Photo)

- Labors assist in the placement of a prefabricated HDPE air release manhole at a high point in the pipeline.



SEWAGE TREATMENT PLANT



6607-92



6607-101



SEWAGE TREATMENT PLANT

A new Sewage Treatment Plant (STP) is being constructed to continue sanitary sewage treatment while the existing STP and surrounding area is remediated to allow for the On-Site Disposal Facility construction. Existing equipment from the Biodenitrification Effluent Treatment System has recently been relocated and will be reconfigured, along with new equipment and some existing STP equipment, as a new site Sewage Treatment Plant.

(Left Photo)

- A Rigger guides a roof panel into place for the UV building.

(Right Photo)

- Overview of the new Sewage Treatment Plant.



T-HOPPER REPACKAGING PROJECT



6714-70



6714-28



T-HOPPER REPACKAGING PROJECT

T-hoppers were once used as bulk shipping containers for uranium products throughout the DOE complex. The T-hoppers on the Fernald site contain uranium trioxide (OU_3) that is less than 1% by weight U_{235} . The uranium trioxide has been sold to an external customer and requires specific packaging. A dumping station is being constructed at Plant 6 to dump and package the uranium trioxide into 55 gallon drums to meet the external customer's material handling requirements.

(Left Photo)

- T-hopper repackaging station ventilation system located on the west side of Plant 6.

(Right Photo)

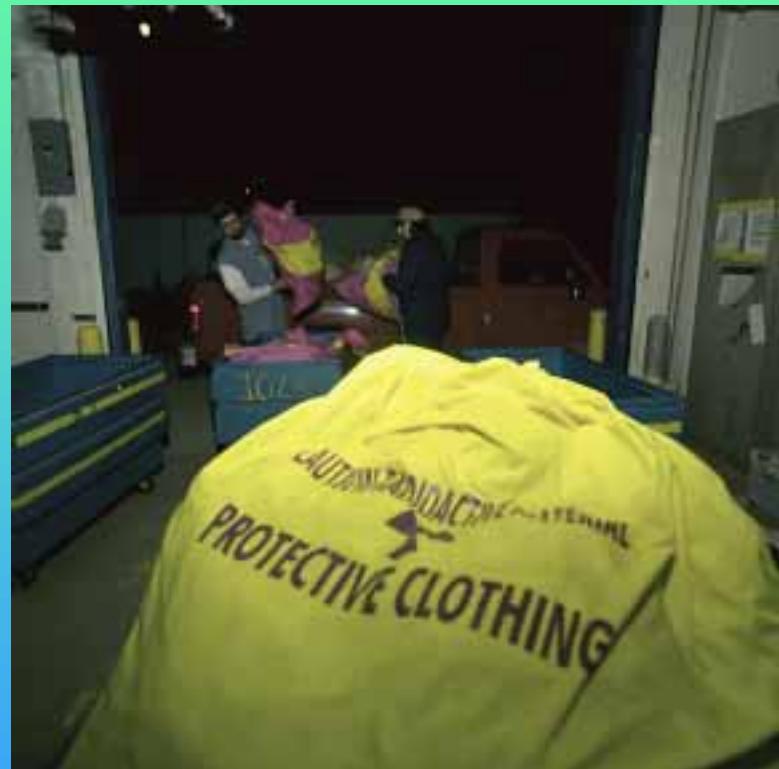
- T-hopper repackaging station located inside Plant 6.



WASTE MINIMIZATION AND POLLUTION PREVENTION



6809-9



6809-10



WASTE MINIMIZATION AND POLLUTION PREVENTION

Reusable Laundry Bag Program

To reduce the quantity of waste sent off site, reusable laundry bags are now used to transport contaminated PPE from the various control points in the controlled area to the laundry facilities. Yellow washable laundry bags are used for cloth PPE and magenta laundry bags are used for shoe covers. By utilizing the washable laundry bags, Fernald will see an average annual cost savings of approximately \$30,000 through the elimination of disposable plastic bags and the minimizing of the amount of low-level waste sent to the Nevada Test Site.

(Left Photo)

- Team members remove washable PPE from yellow reusable laundry bags. The PPE is then laundered along with the bags and returned to various control points for subsequent use.

(Right Photo)

- Team members unload magenta bags full of used shoe covers collected from various control points.